WHAT IS CLAIMED IS:

1. An apparatus, comprising:

a conductive section having a recess which includes a balun portion and a slot portion, said slot portion communicating at one end with said balun portion, and said slot portion having edges on opposite sides thereof which each follow a predetermined curve other than a first-order exponential curve; and

an elongate conductive element which extends generally transversely with respect to said slot portion in the region of said one end thereof, and which can carry an electrical signal.

2. An apparatus according to Claim 1, wherein said predetermined curve for each said edge is configured to facilitate minimization of return loss for electromagnetic signals induced within said slot portion through said elongate conductive element.

3. An apparatus according to Claim 1, wherein said predetermined curve for each said edge is configured as a function of characteristics of said balun portion and said slot portion to facilitate minimization of return loss for electromagnetic signals induced within said slot portion by said conductive element.

4. An apparatus according to Claim 1,

including further structure disposed adjacent an end of said slot portion remote from said one end thereof; and

wherein said predetermined curve is configured as a function of characteristics of said balun portion, said slot portion, and said further structure to facilitate minimization of return loss for electromagnetic signals induced within said slot portion by said conductive element.

5. An apparatus according to Claim 1, wherein said predetermined curve includes first and second exponential characteristics involving respective different exponential powers.

6. An apparatus according to Claim 1, wherein said predetermined curve includes a plurality of exponential characteristics involving respective different exponential powers.

7. An apparatus according to Claim 1,

including a dielectric layer;

wherein said conductive section includes two electrically conductive layers disposed on opposite sides of said dielectric layer, said conductive layers having respective recesses therein which are aligned with each other and which each include a balun hole that is part of said balun portion and a slot that is part of said slot portion; and

wherein said conductive section includes a plurality of vias which each extend between said conductive layers through said dielectric layer, said vias being disposed near each edge of each said slot at spaced locations therealong.

8. A method of modeling operational characteristics of an apparatus which includes a conductive section having a recess with a slot portion, comprising the steps of:

modeling said slot portion as a plurality of segments of electrically conductive material which collectively have a shape that approximates a shape of said slot portion; and

evaluating a characteristic of said slot portion by separately evaluating said characteristic for each of said segments and then combining the evaluations for said segments.

9. A method of evaluating an operational characteristic of an apparatus which includes a conductive section having therein a recess with a balun portion and with a slot portion communicating at one end with said balun portion, and which includes an elongate conductive element extending generally transversely to said slot portion in the region of said one end thereof, said method comprising the steps of:

modeling said slot portion as a transmission line having a plurality of electrically conductive segments which collectively have a shape that approximates a shape of said slot portion; and

evaluating said operational characteristic for said slot portion by separately evaluating a selected characteristic for each of said segments and then combining the results of the separate evaluations for said segments.

10. A method according to Claim 9, including the steps of:

selectively varying the sizes of said segments to obtain a plurality of different segment configurations;

carrying out said evaluating step separately for each of said segment configurations;

selecting one of said segment configurations which optimizes said operational characteristic; and

configuring said slot portion to have a shape corresponding to the collective shape of said segments of said selected segment configuration.

11. A method according to Claim 10, including the steps of:

selecting as said selected characteristic an impedance characteristic; and

selecting as said operational characteristic a return loss characteristic for electromagnetic signals induced within said slot portion through said elongate conductive element.

12. A method according to Claim 10, including the step of configuring said segments to be adjacent and parallel strips which extend in a transverse direction with respect to a length direction of said slot portion, and which each have a dimension in said transverse direction which corresponds to a width of said slot portion at a corresponding location along said slot portion.

13. A method according to Claim 12,

wherein said segments are approximately rectangular, each have a length dimension of a uniform size in a direction parallel to the length direction of said slot portion, and each have a respective width dimension in said transverse direction; and

wherein said step of selectively varying sizes includes the step of selectively varying said length dimension and said width dimensions.

14. A method according to Claim 9, including the steps of:

configuring said balun portion to optimize operation thereof; and

thereafter carrying out said steps of modeling and evaluating, said evaluating step including the step of determining said selected characteristic for said balun portion and then taking said selected characteristic for said balun portion into account when evaluating said selected characteristic for each of said segments.

15. A method according to Claim 9, including the steps of:

providing further structure adjacent an end of said slot portion remote from said one end thereof;

configuring said balun portion to optimize operation thereof;

configuring further structure located adjacent an end of said slot portion remote from said one end thereof to optimize operation thereof; and

thereafter carrying out said steps of modeling and evaluating, said evaluating step including the steps of determining said selected characteristic for said balun portion and for said further structure, and then taking said selected characteristics for said balun portion and said further structure into account when evaluating said selected characteristic for each of said segments.

16. An apparatus, comprising:

a conductive section having a recess which includes a balun portion and a slot portion, said slot portion communicating at one end with said balun portion, and having a width which is narrowest in a first section of said slot portion located near said one end thereof, said slot portion having second and third sections which are disposed on opposite sides of said first section and which each have a width larger than the width of said first section; and

an elongate conductive element which extends generally transversely with respect to said slot portion in the region of said one end thereof.

17. A method comprising the steps of:

creating in a conductive section a recess which includes a balun portion and a slot portion, said slot portion communicating at one end with said balun portion, and having a width which is narrowest in a first section of said slot portion located near said one end thereof, said slot portion having second and third sections which are disposed on opposite sides of said first section and which each have a width larger than the width of said first section; and

fabricating an elongate conductive element which extends generally transversely with respect to said slot portion in the region of said one end thereof.